

Section Nine: Inventory Management

 Estimated
Contact
Time:
45-60 minutes

This module covers:

...the processes required to track, monitor, and maintain adequate numbers of supplies and equipment. Inventory Management is the framework that supports all the other SPD tasks and ensures that medical devices are available, on demand, when users require them. Maintaining accurate, timely inventory control is critical to keeping SPD efficient and cost effective.

Following instruction, you should be able to perform the following:

- ☒ Identify the role of inventory management.
- ☒ Identify purpose and contents of inventory reports.
- ☒ Detail the inventory process.
- ☒ Identify the various approaches to maintaining adequate inventory.

The Key to Cost Control

VA Directive Handbook 7176 defines Inventory Management as the process by which the right product is delivered at the right time, in the right condition, and ready for use, using resources in the most efficient manner and in accordance with established, sound inventory management practices.

The goal of good inventory management is to ensure that all users have what they need, when they need it. The key to doing this cost effectively is to purchase in large enough quantities to receive premium pricing from the vendor without tying up funds with overstocked shelves or retaining unneeded items until they reach their expiration date. SPD contributes to the medical center cost control effort through waste reduction, product standardization, and competitive procurement sourcing.

Inventory management is the responsibility of each SPD employee. You are responsible for accurately recording every item that comes into and is distributed from SPD. Although computerized tracking systems can reduce the time and effort required to manage supplies, they are only as good as the data that is entered into them.

Types of Inventory

Traditionally, there have been two main types of inventory; primary and secondary.

- The **primary** inventory consists of all the supplies stored within the SPD area.
- The **secondary** inventory, or secondaries, is made up of stores of supplies that are kept at the point of use. These include ward closets and nurse servers.

In recent years, with the emphasis on cost containment, alternative inventory systems are becoming available that help control expenditures and reduce the amount of stock medical centers must keep on hand.

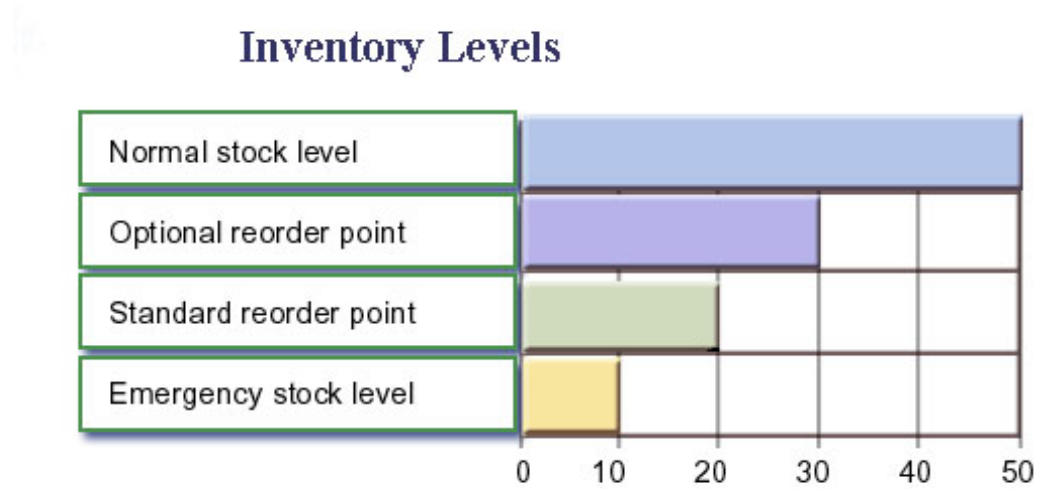
- In a **consignment** arrangement, a vendor maintains a portion of the primary inventory on the shelves and periodically bills the medical center for items used. Consignment is considered a "no cost" inventory program because the medical center pays nothing until items are used. In addition, the vendor may purchase the existing inventory on hand, generating a one time revenue boost.
- Another arrangement allows a single or **prime vendor** to serve as the distributor for a portion of the SPD primary inventory, regardless of brand or manufacturer. The vendor provides scheduled delivery, which allows SPD to greatly reduce the amount of stock on hand.
- A **Just-in-Time (JIT)** system reduces the primary inventory and provides stock for secondaries on a regular basis, ordering and providing the supplies "just-in-time." This system works best when needs can be easily and accurately forecast. SPD conducts an inventory and submits an order to

the vendor, receives and unpacks the supplies when they arrive, and delivers them to the secondary.

- In a **stockless** system, there is no primary inventory. Stock is delivered, prepackaged, to user areas by vendors, 2-3 times per day, 7 days a week. This system is dependant on reliable vendors with efficient distribution systems and is not recommended as the main inventory method.

Inventory Levels

SPD must maintain the appropriate stock levels in each area. There are four levels which must be determined for each item in the primary inventory.



- **Normal Stock**—The normal level represents the largest amount of an item that is to be maintained on SPD shelves.
- **Standard Reorder**—The level at which the item must be reordered. This is calculated by tracking daily use and factoring in the amount of time required to obtain replacement stock.
- **Optional Reorder**—This set-point alerts SPD that the level of an item has fallen below the normal stock level but has not yet reached the standard reorder point level. It allows SPD to consolidate orders for a specific vendor to reduce shipping charges and consolidate unpacking efforts.

- **Emergency Stock**—This is the smallest acceptable amount of an item to be maintained in the primary. This level serves as an alert that the item could be depleted in the near future. An emergency purchase is required in order to avoid having an item become “out -of-stock”.

In secondary inventories, only two levels are used; normal level and reorder level. Because secondaries must be kept stocked to meet users expectations, the normal and reorder level will be the same.

Controlling Inventory

Remember, SPD’s goal is to have enough supplies available for users when they request them, without incurring unnecessary costs by maintaining excess stock or allowing items to reach their expiration dates. Overstocking an item can ensure that you never run out, however, it ties up a considerable amount of money in stock, and increases the risk of damage, outdating, contamination, or obsolescence of the item. Understocking creates the risk of having supplies unavailable and negatively impacting the quality of patient care. It can also generate additional purchase costs in the form of rush shipping. Most important, understocking can affect the trust users have in SPD.

As an SPD employee, you are the front line in controlling costs while meeting user expectations. The type of item, its cost, the user requirements, and frequency of use all factor into how you manage inventory. How often you order, distribute, and inventory supplies is driven by the user needs. While every effort should be made to have all items available at all times, (a 100% fill rate) a more realistic goal is to make sure critical items are available at all times, while less critical items may be on "back-order."

Monitoring Usage

Most medical centers use a computerized system to maintain stock levels and set reorder points. These systems are capable or

tracking vast amounts of data and sorting it into useful output reports. These include:

- *History of Distribution*, which shows the total dollar amounts of supplies distributed to each secondary.
- *Inactive Item Report*, which identifies items that have not been used or requested for a given period of time.
- *Cold/Hot Usage Report*, which tracks changes in the usage of a specific item. This allows SPD to adjust ordering up or down to keep up with user demand.
- *Emergency Stock Level Report*, which flags items that may be in danger of being out-of-stock. This report also tells SPD if the item is currently on order.

Point-of-Use

At some medical centers, automation technology is being used to control supply distribution. Point-of-Use equipment provides controlled access to storage areas. Users enter their code to access supplies and record what they use. The equipment, which is electronically connected to the automated supply tracking system, keeps track of who uses what and generates a “pull list” which technicians use to restock the point-of-use stores. For ordering and budget purposes, it must also be connected to the computerized logistics and financial system.

Eliminating Waste

An item’s shelf life is the time it is expected to remain safe for use. Remember that sterility is event related rather than time related. Contamination doesn't suddenly occur on the last day of the labeled shelf life. Factors such as improper handling, inadequate cooling time after sterilization, excessive stacking of items, exposure to extreme climate conditions, the type of material used, and how well the package is sealed, all impact the sterility of an item. Package integrity should always be examined before using an item and you must follow these guidelines for items with a low turnover rate.

In addition to shelf life constraints, any SPD processed and packaged item that remains unused on the shelf for 6 months must be evaluated to determine if there is still a need for it and if the number being held in inventory is appropriate. If the item is still needed, its location should be evaluated to ensure it is accessible. Medical center processed items should not remain on the shelf for more than a year. They should be reevaluated to determine if they are still needed. If they are to continue to be stocked, they must be reprocessed.

Guidelines for Shelf Life

Item	Store for:
Woven and non-woven wrapped items with no dust cover	30 days
Woven and non-woven wrapped items with a dust cover	1 year
Paper/plastic peel pouch	1 year
Containerized systems	1 year
Commercially packaged items	Manufacturer Recommendations

Standardization

One practical method of reducing medical center costs is to standardize the supplies that are used. This simplifies inventory ordering and storage and allows the medical center to take advantage of volume discounts. The Commodity Standardization Committee and related subcommittees review and evaluate products for use in the medical center. Their goal is to reduce the number, sizes, kinds, and grades of items while maintaining quality, state-of-the-art medical service.

Recalls

Occasionally you may have to locate and remove items from stock as part of a recall. The type of recall will dictate what you do with the items. Items may be recalled due to a positive biological test, manufacturer instructions, or FDA direction.

- **Biological test**

If one of the biological tests on a sterilizer cultures positive (there is evidence of microscopic life) or a control is negative (there is no microorganic growth), you must pull everything that was sterilized after the last good test. Physically retrieve the items from storage and have them reprocessed. If items have already been used, you must notify the user of the bad biological test.

- **Manufacturer's recall**

If a manufacturer has determined that there are problems with a specific product, they may voluntarily recall the product. They will issue a recall which includes instructions regarding what to do with the product and how to get credit for it. Every hospital has a recall manager who is responsible for monitoring recall processes.

- **FDA recall**

In the rare instance where there is a potential for serious injury or death from using a specific product, the FDA may force the product to be taken off the market. These items must be immediately removed from stock and a replacement item found. In some instances, the medical center may not receive credit from the manufacturer.

Summary

Regardless of which automated systems are in place or what inventory types are maintained, the basic inventory management process is the same.

- Required items are identified by user. Standards Committee reviews requests in order to standardize and reduce costs.
- Supply levels are identified in conjunction with the user.

- Supplies are ordered, logged into the system, and stored. If an item must be backordered, the user must be notified and offered a substitution.
- As supplies are distributed or used, they are logged out of the system. The system monitors use and identifies supplies to be reordered based on preset levels.
- Supplies may be ordered automatically or manually. When they are delivered they are logged into the system and the process repeats.
- Periodic inventories of items in storage help to match what is on the shelf with what is in the system.

✓ Check What You Know

1. Match the inventory type to its description.

Primary	No cost inventory approach
Primary vendor	Supplies stored within SPD
Secondary	No primary inventory is maintained by SPD. Stock is delivered to user areas by vendors, 2-3 times a day, 7 days a week
Consignment	Supplies stored at point-of-use
Just-in-time	Reduces primary inventory and delivers supplies for secondaries as needed

2. Effective inventory management...

- a. Delivers the right product
- b. Delivers products at the right time, ready for use
- c. Reduces costs by eliminating inventory on hand
- d. Adheres to sound inventory management practices
- e. Eliminates all but the most necessary items in stock

3. _____ inventory is located within SPD and contains the largest variety of items.
4. _____ inventories include ward closets and nurse servers.
5. _____ inventory allows a vendor to maintain a portion of the primary inventory, billing the medical center periodically for items used.
6. _____ inventory may generate a one time boost in revenue because the vendor may purchase existing inventory.
7. The _____ approach reduces the amount of stock on hand because the vendor acts as distributor for a portion of the primary inventory, providing next day delivery on most item.

8. Most effective when needs can be accurately forecast, _____ inventory allows SPD to take inventory and order stock for secondaries on a regular basis, just as things are needed.
9. _____ inventory eliminates the need for a primary inventory, providing deliveries of stock 2-3 times per day, 7 days a week.
10. Match the stock level to its description.

	Alerts SPD that item should be ordered
	Level of an item has fallen below the normal stock level but has not yet reached the standard reorder point
	The smallest acceptable amount of an item to be maintained in the primary
	The largest amount of an item that should be stored in SPD

Normal Standard Reorder Optional Reorder Emergency Stock

11. The _____ report identifies items that have not been used recently.
12. To determine which department consumed the most supplies in a given quarter, you would use the _____ report.
13. To determine if use of a particular item was on the increase, you would use the _____ report.
14. To avoid running out of something, you should check the _____ report.
15. _____ equipment automatically records supplies as they are used.

16. _____ refers to the amount of time an item is expected to remain sterile in storage.

17. The Commodity Standardization Committee...

- a. Evaluates products for the medical center
- b. Insists that all doctors use the same brand of supplies
- c. Refuses to allow multiple supply vendors
- d. Attempts to reduce costs by eliminating unnecessary purchases

18. Describe each of the following types of recall.

a. Biological test failure

b. Manufacturer

c. FDA

Terminology

The following terms were used in this module.

inventory	Supplies or equipment in stock, available for use.
inventory management	Ordering, tracking and distributing supplies so that necessary supplies are available for use.
overstocked	Having more supplies on hand than are necessary.
under stocked	Having fewer supplies on hand than are necessary, risking a shortage.
secondaries	Storage facilities in the user area. These include nurse servers and ward closets.
Shortage	When necessary supplies are unavailable for use.
cost containment	Managing expenses so that needs are met in the most economical manner, avoiding the need to increase funding
prime vendor	The company that serves as the main supplier of medical supplies and equipment
commodity	Something bought or sold
fill rate	The number of items of a request that are available to place on the shelf (if 40 items were requested and 40 were distributed then the fill rate would be 100 percent)
point-of-use	Occurring at the location where an item is put into service